

CLAIMS:

1 1. A system for verifying the integrity of a set of data used to evaluate attributes of
2 data groups:

3 a data warehouse comprising at least one database and storing a current set of data;
4 a diagnostics module configured to compare the current set of data with historical data to
5 generate diagnostic data and to generate at least one diagnostic report based on the diagnostic
data, wherein data points in the diagnostic report have associated data edit links;

6 a data edit module in communication with the data warehouse and configured to query a
7 user to enter a new value for a specified data point and set the value of the specified data point in
8 the data warehouse to the new value;

9 each data edit link configured to activate the data edit module upon the selection by a
10 user and indicate to the data edit module the data point associated with the respective data edit
11 link.

12 2. The system of claim 1, wherein the data warehouse contains an estimated value
1 derived from the set of data for an attribute; the system further comprising:

2 a return model validation module in communication with the data warehouse, receiving a
3 benchmark value for the attribute as input, and configured to store a difference value derived
4 from comparing the estimated attribute value with the benchmark attribute value;

5 the diagnostic report comprises a report indicating the difference value.

1 3. A method for analyzing the attributes of a plurality of data groups related to a set
2 of data comprising the steps of:
3 providing a set of factors;
4 providing a set of models which model attributes of the data groupings, each model being
5 dependent on at least one factor selected from the set of factors;
6 associating each data grouping with at least one model;
7 determining factor values for at least one of the factors in the set of factors on which the
8 models associated with the data groups depend;
9 for each data group, evaluating an associated model using at least the determined factor
10 values and the set of data to provide a value for the attribute modeled by the associated model;
11 and
12 storing the attribute values.

1 4. The method of claim 3, wherein:
2 the set of data comprises financial data related to a plurality of financial instruments; and
3 the data groups comprise portfolios, each portfolio identifying at least one financial
4 instrument from the plurality of financial instruments.

1 5. A method for analyzing a plurality of portfolios using financial data comprising
2 the steps of:
3 providing a set of factors;
4 providing a set of models which model attributes of portfolios, each model being
5 dependent on at least one factor selected from the set of factors;

associating each portfolio with at least one model;

determining factor values for at least a subset of factors in the set of factors on which the
s associated with the portfolios depend;

for each portfolio, evaluating an associated model using at least the determined factor

values and the financial data to provide a value for the attribute modeled by the associated mode;

11 and

storing the attribute values.

6. The method of claim 5, wherein the set of models comprises at least one risk

model and at least one performance model;

each portfolio being associated with at least one risk model and at least one performance

model.

7. The method of claim 5, wherein the set of models comprises at least one

performance model, a particular portfolio being associated with the performance model such that

3 a performance value for the particular portfolio is determined during the evaluating step, the

4 method further comprising the steps of:

receiving an alternative performance value for the particular portfolio; and

6 comparing the determined performance value with the alternative performance value.

8 The method of claim 7, further comprising the step of indicating a potential da

² integrity condition when the determined performance value and the alternative performance

3 value differ by more than a predefined value.

1 9. The method of claim 7, wherein the performance model models portfolio return
2 and the alternative performance value is an officially reported value for the return of the
3 particular portfolio.

1 10. The method of claim 5, wherein each portfolio is associated with at least one
2 model in accordance with an investment strategy reflected by the respective portfolio.

11. The method of claim 5, further comprising the steps of:
 - making the factor set available to a model development platform;
 - developing in the development platform a new model dependent on at least one factor selected from the set of factors; and
 - adding the new model to the set of models.

12. The method of claim 11, wherein each model in the set of models is defined as a
2 model object having a format which is compatible with the model development platform.

1 13. The method of claim 5, further comprising the step of generating at least one
2 report based upon the portfolio attribute values.

- 1 14. A system for analyzing portfolios using financial data comprising:
 - 2 a factor library comprising a plurality of factors;
 - 3 a model database comprising a set of model objects defining models for portfolio
 - 4 attributes, each model being dependent on at least one factor in the factor library;

5 a plurality of portfolio objects, each portfolio object configured to store at least one
6 attribute to be determined for the respective portfolio, each portfolio object being associated with
7 at least one model;
8 a factors determination module configured to determine factor values for at least a subset
9 of factors in the factors library and store the factor values in a factor value database; and
10 a model evaluation module configured to evaluate models associated with a particular
11 portfolio using at least the determined factor values and the financial data to provide a value for
12 the attribute modeled by the associated mode and store the attribute values in the respective
13 portfolio object for the particular portfolio.

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15. The system of claim 14, further comprising a plurality of performance objects,
each performance object being associated with a respective portfolio and being configured to
store a historical time-series of at least the attribute to be determined for the associated portfolio;
the model evaluation module being further configured to add the determined factor values
for the respective portfolio to the associated performance object.

1 16. The system of claim 14, wherein the set of model objects comprises objects
2 defining at least one risk model and at least one performance model;
3 each portfolio object being associated with at least one risk model object and at least one
4 performance model object.

1 17. The system of claim 14, wherein the set of models comprises at least one
2 performance model object, a particular portfolio being associated with the performance model

3 object, wherein the model evaluation module provides a performance value for the particular
4 portfolio;

5 the system receiving as input an alternative performance valuation for the particular
6 portfolio;

7 the system further comprising a model validation module configured to store a difference
8 value derived from comparing the performance value with the alternative performance value.

14 18. The system of claim 17, further comprising a data integrity module configured to
indicate a potential data integrity condition when a magnitude of the difference value exceeds a
predefined value.

15 19. The system of claim 17, wherein the performance model object models portfolio
return and the alternative performance value is an officially reported value for the return of the
particular portfolio.

1 20. The system of claim 14, wherein each portfolio object and each model object has
2 a unique ID, the association between portfolio objects and model objects being specified in a
3 portfolio association table.

1 21. The system of claim 14, further comprising an interface module configured to
allow data from the factor value database to be exported from a model development platform and
3 to allow model objects to be imported to the model database from the model development
4 platform.

1 22. The system of claim 14, further comprising a report generation module configured
2 to generate at least one report based upon the portfolio attribute values.

1 23. A method for verifying the integrity of financial data used to evaluate portfolios
2 comprising the steps of:

3 receiving current financial data from a data source;

4 storing the received data in a data warehouse;

5 generating at least one diagnostic report from the received data, the diagnostic report
6 containing a data point and an embedded data edit link; and

7 upon selection of the embedded data edit link by a user, requesting input from the user
8 specifying a new value for the data point and setting the value of the data point as stored in the
9 data warehouse to the new value.

10 24. The method of claim 23, further comprising the steps of:

11 generating summary indicator values based on the current financial data;

12 the step of generating at least one diagnostic report further comprising generating a

13 summary diagnostic report containing summary indicator values and an embedded link from a

14 summary indicator value to a diagnostic report containing the data used to generate the summary

15 indicator value.

16 25. The method of claim 23, wherein the at least one diagnostic report contains data

17 indicating at least one of outlier data, cross-sectional volatility, and corporate actions.

1 26. The method of claim 23, wherein the at least one diagnostic report comprises a
2 historical time series report for attributes associated with a security, each attribute having an
3 embedded data edit link.

1 27. The method of claim 23, further comprising the steps of:
2 receiving an estimated portfolio return generated using data in the data warehouse;
3 receiving an official return for the portfolio;
the at least one diagnostic report comprising a report comparing the estimated portfolio
return to the official portfolio return.

1 28. The method of claim 23, wherein the diagnostic report further comprises a data
information link associated with data in the diagnostic report; the method further comprising the
step of:

4 upon selection of the data information link by the user, returning research information
5 related to the associated data in the diagnostic report, the returned data increasing the ability of
6 the user to determine if the associated data is in error.

1 29. A method for verifying the integrity of financial data used to evaluate a portfolio
2 comprising the steps of:

3 receiving current financial data from a data source including information about securities
4 in the portfolio;
5 storing the received data in a data warehouse;

6 receiving an estimated return value for the portfolio determined using the data
7 warehouse;

8 receiving an official return value for the portfolio;

9 providing a diagnostic report comparing the official return value with the estimated return
10 value, the comparison report containing a first embedded link associated with the portfolio;

11 upon selection of the first embedded link in the comparison report by a user, providing a
12 constituent report indicating the securities comprising the portfolio and attributes of the
13 securities, the constituent report containing second embedded links, each second embedded link
14 associated with a particular security;

15 upon selection by the user of a second embedded link in the constituent report, providing
16 a historical time series report for attributes of the security associated with the selected second
17 embedded link, each attribute in the historical time series report having an embedded data edit
18 link;

19 upon selection of an embedded data edit link by the user, requesting input from the user
20 specifying a new value for the attribute associated with the selected data edit link, and setting the
21 value of the attribute as stored in the data warehouse to the new value.

1 30. A method for verifying the integrity of financial data related to a plurality of
2 securities comprising the steps of:

3 receiving current financial data from a data source including information about the
4 plurality of securities;

5 storing the received data in a data warehouse;

6 comparing the current financial data with historical data to identify securities having
7 outlier attributes;

8 providing a diagnostic report indicating the identified securities, each identified security
9 having an associated first embedded link;
10 upon selection of a first embedded link by a user, providing a historical time series report
11 for attributes of the security associated with the selected first embedded link, each attribute in the
12 historical time series report having an embedded data edit link;
13 upon selection of an embedded data edit link by the user, requesting input from the user
14 specifying a new value for the attribute associated with the selected data edit link, and setting the
15 value of the attribute as stored in the data warehouse to the new value.

31. The method of claim 30, wherein each identified security in the diagnostic report
has an associated second embedded link;

3 the method further comprising the step of, upon selection of a second embedded link by
4 the user; providing research information related to the security associated with the selected
5 second embedded link, the research information increasing the ability of the user to determine if
6 the attribute data for the particular security is in error.

1 32. A system for verifying the integrity of financial data used to evaluate portfolios
2 comprising:

3 a data warehouse comprising at least one database and storing current financial data;
4 a diagnostics module configured to compare the current financial data with historical
5 financial data to generate diagnostic data and to generate at least one diagnostic report based on
6 the diagnostic data, wherein data points in the diagnostic report have associated data edit links;

7 a data edit module in communication with the data warehouse and configured to query a
8 user to enter a new value for a specified data point and set the value of the specified data point in
9 the data warehouse to the new value;

10 each data edit link configured to activate the data edit module upon the selection by a
11 user and indicate to the data edit module the data point associated with the respective data edit
12 link.

1 33. The system of claim 32, wherein the data warehouse contains an estimated
2 performance value for a portfolio; the system further comprising:
3 a return model validation module in communication with the data warehouse,
4 receiving an alternative performance value for the portfolio as input, and configured to store a
5 difference value derived from comparing the performance value with the alternative performance
6 value.

1 34. The system of claim 33, wherein the at least diagnostic report comprises a report
2 comparing the alternative performance return value with the estimated performance value.

1 35. The system of claim 34, wherein the estimated performance value is an estimated
2 return for the portfolio and the alternative portfolio is officially reported return value for the
3 portfolio.

1 36. The system of claim 34, further comprising an analytics module in
2 communication with the data warehouse and configured to determine the estimated performance
3 value for the and store the estimated performance value in the data warehouse.